

20030527.qrp v02_n933.qrl.20030527

Date: Tue, 27 May 2003 19:03:14 EDT
From: qrp-l@Lehigh.EDU
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: QRP-L digest 2933

QRP-L Digest 2933

Topics covered in this issue include:

- 1) [151365] Re: Diamond CP6 Antenna
by "James R. Duffey" <JamesDuffey@comcast.net>
- 2) [151366] KK5YY Memorial Gathering
by "Brian P. Mileschosky" <n5zgt@swcp.com>
- 3) [151367] Re: Third Order Intercept
by "Glen Leinweber" <leinwebe@mcmail.cis.mcmaster.ca>
- 4) [151368] QAMP40 info request.
by Michael Byrd <m.byrd10@verizon.net>
- 5) [151369] For Sale
by Michael Goins <mgoins@usa.net>
- 6) [151370] HP 8558B spectrum analyzer - info?
by "Paul Ermisch" <paul@ermisch.com>
- 7) [151371]
by Michael Goins <mgoins@usa.net>
- 8) [151372] FS: Yaesu YH-77ST stereo headphones
by "Scott Rosenfeld [N7JI]" <ham@w3eax.umd.edu>
- 9) [151373] AT Sprint" T1 question"
by "John A. Evans - N0HJ" <jaevas@codenet.net>
- 10) [151374] survey
by Marten T Beels <martentb@goshen.edu>
- 11) [151375] This is a Rock-Mite-RTTY special report !
by "Bill, N4QA" <n4qa@hotmail.com>
- 12) [151376] Re: survey
by "john_k7fd" <john_k7fd@cablespeed.com>
- 13) [151377] Re: AT Sprint" T1 question"
by "sslyon" <sslyon@megalink.net>
- 14) [151378] Re: survey
by Mike Malone <mmalone@ruggedridge.com>
- 15) [151379] Cigarette Lighter Polarity
by "pschweit" <pschweit@mninter.net>
- 16) [151380] Green Errata Card Left out of 25 Miniboats kits
by "Doug Hendricks" <ki6ds@dph.dpol.net>
- 17) [151381] Re: Cigarette Lighter Polarity
by JD Delancy <W1JD@drix.net>
- 18) [151382] For sale: Unbuilt Ten-Tec 1210 10-to-2m transverter kit
by "Scott Rosenfeld [N7JI]" <ham@w3eax.umd.edu>
- 19) [151383] Re: Cigarette Lighter Polarity

- by David Hinerman <WD8CIV@worldnet.att.net>
- 20) [151384] Re: survey
by Dale Botkin <dale@botkin.org>
- 21) [151385] CQC Members: Help required at the Hamcon Convention
by "DICK SCHNEIDER" <SCHNEIDERDICK@QWEST.NET>
- 22) [151386] Re: survey
by "James R. Duffey" <JamesDuffey@comcast.net>
- 23) [151387] Lighter polarity
by Pete Burbank <plburbank@earthlink.net>
- 24) [151388] Surplus Solar Panels
by Brian Short <bshort4@cox.net>
- 25) [151389] Re: Dayton Icom Announcement
by Bill Coleman <aa4lr@arrl.net>
- 26) [151390] Re: Dayton Icom Announcement
by Bill Coleman <aa4lr@arrl.net>
- 27) [151391] A buying experience at Quality Technical Books
by Alex <kr1st@amsat.org>
- 28) [151392] Re: survey
by "Karl F. Larsen" <k5di@zianet.com>
- 29) [151393] Re: AT Sprint" T1 question"
by steve.lawrence@itwfeg.com
- 30) [151394] Sierra IF amp mod ?
by "aberkuta" <aberkuta@shoal.net.au>
- 31) [151395] OT: Best Regards from my Car?
by David Ek <ekdave@earthlink.net>
- 32) [151396] Survey > opinions
by "sslyon" <sslyon@megalink.net>
- 33) [151397] HB: MP+ SWR Kit completed.
by "w8diz" <w8diz@fpqrp.com>
- 34) [151398] Re: A buying experience at Quality Technical Books
by Alex <kr1st@amsat.org>
- 35) [151399] Re: Survey > opinions
by "john_k7fd" <john_k7fd@cablespeed.com>
- 36) [151400] Re: survey
by Caitlyn Martin <ku4qd@earthlink.net>
- 37) [151401] Re: survey: Re Rigs
by "sslyon" <sslyon@megalink.net>
- 38) [151402] Re: survey
by Caitlyn Martin <ku4qd@earthlink.net>
- 39) [151403] K2 TOI numbers
by "Karl F. Larsen" <k5di@zianet.com>
- 40) [151404] Re: OT: Best Regards from my Car?
by "Karl F. Larsen" <k5di@zianet.com>
- 41) [151405] Receiver performance (was: Dayton Icom Announcement)
by Caitlyn Martin <ku4qd@earthlink.net>
- 42) [151406] Descriptions and Photos of rigs
by "Bill Jones" <kd7s@psnw.com>
- 43) [151407] More Third Order Intercept Technical Stuff

by Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>
44) [151408] Help ID (and revive) an OHR rig
by David Simmons <dsimmons@macromedia.com>
45) [151409] Re: K2 TOI numbers
by Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>
46) [151410] RE: Third Order Intercept
by "Hare,Ed, W1RFI" <w1rfi@arrl.org>
47) [151411] Teflon wire shipped overseas \$20 US
by <n2go@arrl.net>
48) [151412] Re: Lighter polarity
by "bob baxter" <rbaxter@cybertrails.com>
49) [151413] Re: K2 TOI numbers
by "Karl F. Larsen" <k5di@zianet.com>
50) [151414] Re: More Third Order Intercept Technical Stuff
by "Karl F. Larsen" <k5di@zianet.com>
51) [151415] RE: More Third Order Intercept Technical Stuff
by Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>
52) [151416] Re: K2 TOI numbers (longish)
by "cal.jsi" <cal.jsi@verizon.net>
53) [151417] FOR SALE update
by Michael Goins <mgoins@usa.net>
54) [151418] Iowa QRP Club CW Net
by mark.milburn@juno.com
55) [151419] GDO
by Ed Tanton <n4xy@earthlink.net>
56) [151420] Re: Lighter polarity
by Rick McKee <kc8aon@juno.com>

Date: Mon, 26 May 2003 16:28:20 -0600
From: "James R. Duffey" <JamesDuffey@comcast.net>
To: g4wif@btinternet.com
Cc: QRP-L <qrp-l@lehigh.edu>
Subject: [151365] Re: Diamond CP6 Antenna
Message-ID: <BAF7F124.764C%JamesDuffey@comcast.net>
MIME-version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT

Tony - I don't think that this gives dimensions, but the assembly instructions for the CP-6 are here

<<http://www.rfparts.com/diamond/CP6A.pdf>>

The overall length is 4.6 M, so I suppose you could scale the lengths from a good photo or drawing. - Duffey

James R. Duffey KK6MC/5
Cedar Crest NM 87009 DM65

Date: Mon, 26 May 2003 16:30:11 -0600
From: "Brian P. Mileschosky" <n5zgt@swcp.com>
To: "List QRP-L" <qrp-l@Lehigh.EDU>
Subject: [151366] KK5YY Memorial Gathering
Message-ID: <007301c323d6\$5f5b5360\$620586cc@hlw11>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

QRPers,

This may be of interest to those of you who knew Jerry KK5YY, who was involved -- amongst everything else in Ham Radio -- in QRP.

Barbara, Jerry KK5YY's wife, asked me to distribute information about Jerry's memorial gathering. Please pass this on to other hams you know, on nets, at Ham gatherings, etc. The gathering will take place this Sunday, June 1st, 2:00PM at the Pajarito Ski Lodge. The area is through Los Alamos on the way to Jemez Springs. There will be a road to the right with a small brown sign with a skier on it and you follow that road to the end where you'll see the runs and the lodge. Complete driving directions are located at <http://www.skipajarito.com/directions.html>. Barbara is really hoping that a lot of people are able to come because it would make Jerry feel happy. Jerry knew many of you guys and gals, so please forgive Barbara if she doesn't recognize you!

This will not be a service. Just a few little desserts, drinks and pictures of Jerry, etc. She hopes a few people will feel comfortable sharing a story or a few remarks with the group that is there. Just being there will mean a lot to them, but if you are unable to make it, please at least spend a minute or two around that time thinking of Jerry.

While the above is all the information anyone should need, if there are any questions, don't hesitate to email me with them. I hope to see everyone there to remember and pay tribute to a great Ham. Local repeaters that can be used on the way from at least the Albuquerque area are the 145.33 (-, 100 Hz PL) on Sandia Crest and the 145.19 (-, no PL) atop Pajarito Mountain. Let's all produce some RF and chat on the way.

73,
Brian, N5ZGT

Amateur Radio Station N5ZGT - N5ZGT PBBS, 145.01 MHz
ARRL Life Member, NorCal #1700, QRP-L #580, AK/QRP #125
Boy Scouts of America - Eagle Scout - ASM, Troop 409
Vigil Honor Member, O.A. Lodge 66 Yah-Tah-Hey-Si-Kess

Date: Mon, 26 May 2003 19:05:09 -0400
From: "Glen Leinweber" <leinwebe@mcmail.cis.mcmaster.ca>
To: "qrp-l" <qrp-l@lehigh.edu>
Subject: [151367] Re: Third Order Intercept
Message-ID: <004e01c323db\$41780320\$07ea7182@mcmaster.ca>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="Windows-1252"
Content-Transfer-Encoding: 7bit

Seems to me there's a slight procedural difference between ARRL
IP3 measurements, and that of another guru, namely Ulrich Rohde.

The standard IP3 test compares two signal levels - the signal level
of one of two tones coming into the receiver front end, and the
signal level of one of the IP3 "birdies". The ratio of these two levels
is used to find the intercept.

But nowhere does it say how strong these two levels should be.
Everyone agrees that measurements should be done in the region
where IP3 birdies increase at a rate 3X that of input signals. This
still leaves quite a range over which measurements can be made...

ARRL tests with signal levels as small as possible...the input level
is set so that the IP3 birdie is just equal to the noise level of the
receiver.

Rohde says this is prone to a bit of error - that measuring noise
levels is a bit less precise than measuring signal levels accompanied
by very little noise.

So he likes to measure the birdie amplitude at a higher level.
He runs the risk of signal levels above the "3X rule". But I'm sure
he's careful to check for that.

Am wondering if the ARRL method might give a bit different result
than Rohde's method? If the noise floor is raised by reciprocal
mixing (caused by phase noise of the receiver's local oscillator),
then what's the noise floor? "MDS" (minimum discernable signal)
is used as the noise floor in ARRL calculations, and is based on
the noise floor with just a 50 ohm resistor connected to the input.
Does ARRL discriminate between noise floor with no signals

present, and the noise floor with two strong IP3 test signals present?

Nick has mentioned the consideration for choosing the frequency spacing between the two test tones - often 20 KHz. Should be small enough so both tones get into the front-end mixer without either getting attenuated by RF filters. Yet far enough apart that the I.F. filter can reject both tones entirely, and pass the birdie.

So it becomes a test of front-end signal-handling ability, not a test of I.F. selectivity.

Date: Mon, 26 May 2003 19:20:22 -0400
From: Michael Byrd <m.byrd10@verizon.net>
To: qrp-l@Lehigh.EDU
Subject: [151368] QAMP40 info request.
Message-ID: <3ED2A132.C7CF564@verizon.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii; x-mac-type="54455854"; x-mac-creator="4D4F5353"
Content-Transfer-Encoding: 7bit

Good Day,

I recently purchased several QAMP40 from Ramsey and wanted to know if any of this group has experience with them. I looked all the info on the 20 meter model and know there was some problems. Most of the issues apply to all band models. If anyone has personal experience with the 40 meter version and can add additional information please e-mail me. This will be part of a transmitter project to use with my Icom R75.

Thanks,
Mike - AC4UR

Date: Mon, 26 May 2003 18:38:27 -0500
From: Michael Goins <mgoins@usa.net>
To: <qrp-l@lehigh.edu>
Subject: [151369] For Sale
Message-ID: <287HeZXMb6400S10.1053992307@cmsweb10.cms.usa.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1

Content-Transfer-Encoding: quoted-printable

Kenwood HS-5 headphones, new, no box. Includes spare cups (also new). \$50=

PowerPort radio pouch for the FT-817. New. \$33

Mirage Wattmeter, 200/200/20 meter. Very good. \$100

RS Digital wattmeter w/wall wart. Have a WM-2 and one of Steve's digitals= (unbuilt) and just don't need. \$50

Please reply off list, and will consider qrp related trades. Thanks for t= he space.

72,

mike

wb5yjx

100% Solar station: SW20+, SW30+, RM-40

Mobile: FT-817 @ 1 watt, CW and SSB

QRP-ARCI 3922 (former managing editor, QRP Quarterly), =

SOC 54, Flying Pig 447, QRP-L 2130, Adventure Radio 810,
Alaska QRP 514, QCWA 30857

Date: Mon, 26 May 2003 17:50:26 -0600

From: "Paul Ermisch" <paul@ermisch.com>

To: "Qrp-List" <qrp-l@Lehigh.EDU>

Subject: [151370] HP 8558B spectrum analyzer - info?

Message-ID: <NHBBIMAFPBCKANGJGAPDGEGFCBAA.paul@ermisch.com>

MIME-Version: 1.0

Content-Type: text/plain;
charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

Sorry if this is a repeat - been having problems sending from a new e-mail account.

There is a Hewlett Packard 8558B SA for auction by a QRP'er on eBay right now and I can see that several others have been sold (with and without display screens) in the last few months for what appears to be reasonable

prices. Can anyone on the list provide any more info about these analyzers and if they're a good buy?

Paul KB0LUR

Date: Mon, 26 May 2003 19:19:07 -0500
From: Michael Goins <mgoins@usa.net>
To: <qrp-l@lehigh.edu>
Message-ID: <725HeAaTH4096S01.1053994747@uwdvg001.cms.usa.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: quoted-printable

The Kenwood phones and digital wattmeter are sold. =

Still have the PowerPort radio pouch for the FT-817 and Mirage Wattmeter,=
(have a WM-2 and one of Steve's digitals(unbuilt) and just don't need it.=
=

Thanks.

72,
mike
wb5yjx
100% Solar station: SW20+, SW30+, RM-40
Mobile: FT-817 @ 1 watt, CW and SSB
QRP-ARCI 3922 (former managing editor, QRP Quarterly), =

SOC 54, Flying Pig 447, QRP-L 2130, Adventure Radio 810,
Alaska QRP 514, QCWA 30857

Date: Mon, 26 May 2003 19:21:57 -0400 (EDT)
From: "Scott Rosenfeld [N7JI]" <ham@w3eax.umd.edu>
To: qrp-l <qrp-l@lehigh.edu>
Subject: [151372] FS: Yaesu YH-77ST stereo headphones
Message-ID: <Pine.LNX.4.44.0305261917310.29644-1000000@w3eax.umd.edu>
MIME-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

For sale, 1 pair Yaesu YH-77ST stereo headphones, nice condition, lightly used. Lightweight but not overly small. Nice, full audio.

1/4" stereo plug.

Not new but in very good shape (slight wear on foam ear pads).

\$52 new, asking \$33.

--

Scott Rosenfeld ARS N7JI
541-684-9970 Eugene, OR Land o' much rain
If you find me on the air, I'm probably in my car
ham@w3eax.umd.edu <http://w3eax.umd.edu/~ham>

Date: Mon, 26 May 2003 18:35:54 -0600
From: "John A. Evans - N0HJ" <jaevans@codenet.net>
To: qrp-l@lehigh.edu
Subject: [151373] AT Sprint" T1 question"
Message-ID: <3ED2B2EA.D7B2EFAE@codenet.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Greetings All again,

I have my Q1/Q2 et al dyslexic questions answered but now I have a question about T1 on each band module. Are folks winding the secondary close to the center of the primary windings, or is it OK to wind the 5 turns around the ends of the secondary turns, near where the wires all connect to the module pads??

tnx es 72 - john - n0hj

Date: Mon, 26 May 2003 19:48:58 -0500
From: Marten T Beels <martentb@goshen.edu>
To: qrp-l@Lehigh.EDU
Subject: [151374] survey

Message-ID: <1053996538.3ed2b5fa660b3@mail.goshen.edu>

MIME-Version: 1.0

Content-Type: text/plain; charset=ISO-8859-1

Content-Transfer-Encoding: 8bit

Hello, I'm trying to figure out how to spend my hard earned money. I'm looking at a one or two band QRP rig and there are a lot of options from Oak Hills Research, Wilderness Radio, Elecraft, and Small Wonder Labs. I thought it would be interesting to do a sort of survey.

- 1) If you could only have one band for QRP, what would it be?
- 2) If you could only have one band for QRP for the next five years, what would it be?
- 3) How about which two bands?

I'm thinking about going with 40 and 15, or 80 and 30 meters because it is my understanding that the higher bands 15 and 30 could be operated on their third harmonic on antennas for 40 and 80 respectively. Also, 40 and 80 should be good bands for the next five years and each as a novice portion where I could work on my CW skills. However, an antenna for 80 meters would be rather difficult to put up, given that I'll be living in an apartment for the next couple of years.

Thanks!

Marten
KC8HZM

This mail sent through IMP: <http://horde.org/imp/>

Date: Mon, 26 May 2003 21:17:56 -0400

From: "Bill, N4QA" <n4qa@hotmail.com>

To: qrp-l@Lehigh.EDU

Subject: [151375] This is a Rock-Mite-RTTY special report !

Message-ID: <BAY1-F146IVuAup0E9Q0003cd74@hotmail.com>

Mime-Version: 1.0

Content-Type: text/plain; format=flowed

Well, folks, scored state number eleven...Maryland, this evening. Then, just a few minutes ago, I called CQ on 14088 KHz RTTY with the Rock-Mite-20 again and was answered by:

Olivo, PP5ZP in Blumenau, Brazil !

Let's see, the band's short...no, wait it's LONG...I mean, it's short AND long...er...uh...

20's open, y'all.

Oh yeah, last evening, near the end of the WPX contest I think it was, worked Missouri with the Rock-Mite-20 in CW mode on 14088 KHz...I LOVE it !

73.

Bill, N4QA

Protect your PC - get McAfee.com VirusScan Online
<http://clinic.mcafee.com/clinic/ibuy/campaign.asp?cid=3963>

Date: Mon, 26 May 2003 18:20:31 -0700
From: "john_k7fd" <john_k7fd@cablespeed.com>
To: <martentb@goshen.edu>,
"Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [151376] Re: survey
Message-ID: <000401c323ee\$2c487300\$3801a8c0@hamshack>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

> 1) If you could only have one band for QRP, what would it be? 40 meters
>
> 2) If you could only have one band for QRP for the next five years, what
would
> it be? 40 meters
>
> 3) How about which two bands?

40 m and 20 m

If you're going to operate one band on qrp, go 40m and go with the
Wilderness NC40a with KC-1.

If you're going to operate two bands, go 20m and 40m with the Elecraft K1.

Both are economical and have superior performance. 40m and 20m will
consistently yield the most qrp to qrp qso's, aka 7.040MHz and 14.060MHz.

You'll need a separate antenna for both bands for best results; a resonant single band antenna gives the most bang for your qrp buck...anything else is a compromise. You don't want compromise antennas on qrp...if you can do otherwise.

Good luck!

73 John K7FD

Date: Mon, 26 May 2003 21:39:21 -0400
From: "sslyon" <sslyon@megalink.net>
To: <jaevans@codenet.net>,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [151377] Re: AT Sprint" T1 question"
Message-ID: <003201c323f0\$cbda2420\$0ac8e742@megalink.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Good question, John. I've had it both ways here, trying to optimize wire routing, but I didn't see any difference. sort of flees against common wisdom but His Solderness also says it should be negligible.

73
aa1my

Seabury & Sharon Lyon
99 Sparrowhawk Mtn Rd
Bethel ME, 04217 U.S.A.
207-836-2576

Virus Protection by Norton and ZoneAlarm
----- Original Message -----
From: "John A. Evans - N0HJ" <jaevans@codenet.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Monday, May 26, 2003 8:35 PM
Subject: AT Sprint" T1 question"

> Greetings All again,
>
> I have my Q1/Q2 et al dyslexic questions answered but now I have a
> question about T1 on each band module. Are folks winding the secondary

> close to the center of the primary windings, or is it OK to wind the 5 turns
> around the ends of the secondary turns, near where the wires all connect to
> the module pads??

>
> tn timer 72 - john - n0hj
>
>
>

Date: 26 May 2003 08:47:18 -0500
From: Mike Malone <mmalone@ruggedridge.com>
To: martentb@goshen.edu
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [151378] Re: survey
Message-ID: <1053956841.22736.1.camel@localhost.localdomain>
Content-Type: text/plain
Content-Transfer-Encoding: 7bit
Mime-Version: 1.0

I would have to say 40 and 20.
40 is almost always a good place for QRP in the evening and 20 is good
in the daytime... 15 doesn't open as often as 20. I love 30 as an
escape from contests and enjoy the evenings on 30 but if I could only
have 2 it would be 20 and 40.

KD5KXF

On Mon, 2003-05-26 at 19:48, Marten T Beels wrote:

> Hello, I'm trying to figure out how to spend my hard earned money. I'm
> looking at a one or two band QRP rig and there are a lot of options from Oak
> Hills Research, Wilderness Radio, Elecraft, and Small Wonder Labs. I thought
> it would be interesting to do a sort of survey.
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> I'm thinking about going with 40 and 15, or 80 and 30 meters because it is my
> understanding that the higher bands 15 and 30 could be operated on their third
> harmonic on antennas for 40 and 80 respectively. Also, 40 and 80 should be
> good bands for the next five years and each as a novice portion where I could
> work on my CW skills. However, an antenna for 80 meters would be rather

> difficult to put up, given that I'll be living in an apartment for the next
> couple of years.

>

> Thanks!

>

> Marten

> KC8HZM

>

>

> -----
> This mail sent through IMP: <http://horde.org/imp/>

> ---

> [This E-mail scanned for viruses by Declude Virus]

>

>

[This E-mail scanned for viruses by Declude Virus]

Date: Mon, 26 May 2003 21:35:54 -0500

From: "pschweit" <pschweit@mninter.net>

To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>

Subject: [151379] Cigarette Lighter Polarity

Message-ID: <001401c323f8\$b3a36f80\$2ee8add1@oemcomputer>

MIME-Version: 1.0

Content-Type: text/plain;
charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

On cars in the united states, Is there a standard polarity for the electric
lighter?

Is the center standatrd at (+) or (-)

DE rob

KA0PGQ

Date: Mon, 26 May 2003 19:35:29 -0700

From: "Doug Hendricks" <ki6ds@dph.dpol.net>

To: <qrp-1@Lehigh.EDU>

Subject: [151380] Green Errata Card Left out of 25 Miniboost kits

Message-ID: <036401c323f8\$a37c4dc0\$4a0b0d0a@dph.dpol.net>

MIME-Version: 1.0

Content-Type: text/plain;
charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

Guys, we subbed some T37-6 toroids for some T50-6 toroids in some of the Miniboost kits and we put a green errata card in the parts bags. Well, guess who forgot to put them in 25 of them? Yep, old Dougie screwed up again. Can't blame this one on anyone but myself. If you have a Miniboost kit with T37-6 (yellow) toroids you need the following information:

Errata: Note, the T50-6 toroids in your kit have been changed from T50-6's to T37-6's. Please go to the parts list page and make the following changes to your manual:

L2 = T37-6 with 12 turns #22 AWG

L3 = T37-6 with 13 turns #22 AWG

L4 = T37-6 with 17 turns #22 AWG

Also, everyone needs to be aware that a ground was left off transistor Q2. Make sure that you ground the emitter of Q2, either by scraping off some resist on the ground plane and soldering the lead to that spot instead of the hole, or to a nearby ground pad. Randy Foltz suggests to the ground pad of the BNC connection. Sorry for the inconvenience. 72, Doug

Date: Mon, 26 May 2003 22:52:32 -0400

From: JD Delancy <W1JD@drix.net>

To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>

Subject: [151381] Re: Cigarette Lighter Polarity

Message-ID: <3ED2D2F0.9E1E591B@drix.net>

MIME-version: 1.0

Content-type: text/plain; charset=us-ascii

Content-transfer-encoding: 7BIT

Every GM vehicle I've had, the center was plus

Since all American made vehicles are negative ground, I'd suspect that the center pin on a lighter plug would be positive in any of them

pschweit wrote:

> On cars in the united states, Is there a standard polarity for the electric
> lighter?

>
> Is the center standatrd at (+) or (-)
>
> DE rob
>
> KA0PGQ

Date: Mon, 26 May 2003 22:18:48 -0400 (EDT)
From: "Scott Rosenfeld [N7JI]" <ham@w3eax.umd.edu>
To: tentec@contesting.com, qrp-l <qrp-l@lehigh.edu>,
Laurel ARC <larc-l@webtrek.com>, <eax@w3eax.umd.edu>,
Subject: [151382] For sale: Unbuilt Ten-Tec 1210 10-to-2m transverter kit
Message-ID: <Pine.LNX.4.44.0305262216540.392-100000@w3eax.umd.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

I have for sale one unbuilt Ten-Tec 1210 10-to-2m transverter kit.

It's in perfect unconstructed condition.

It sells for \$139 new (plus shipping).

Asking \$119 plus shipping if applicable.

Thanks,

Scott N7JI

--
Scott Rosenfeld ARS N7JI
541-684-9970 Eugene, OR Land o' much rain
If you find me on the air, I'm probably in my car
ham@w3eax.umd.edu <http://w3eax.umd.edu/~ham>

Date: Mon, 26 May 2003 23:18:58 -0400
From: David Hinerman <WD8CIV@worldnet.att.net>
To: qrp-l@lehigh.edu
Subject: [151383] Re: Cigarette Lighter Polarity
Message-ID: <5.1.1.6.1.20030526231552.00b1c6d0@postoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 09:35 PM 5/26/2003 -0500, you wrote:

>On cars in the united states, Is there a standard polarity for the electric
>lighter?

>

>Is the center standatrd at (+) or (-)

Rob,

All the cars I've owned (from the 1966 Plymouth to the 2000 Pontiac) had
positive on the tip.

If you run across one of the rare vehicles with positive ground, YPMV (Your
Polarity May Vary).

Dave

Dave Hinerman
WD8CIV@att.net

Date: Mon, 26 May 2003 22:39:09 -0500 (CDT)
From: Dale Botkin <dale@botkin.org>
To: QRP list <qrp-l@Lehigh.EDU>
Subject: [151384] Re: survey
Message-ID: <Pine.LNX.4.33.0305262238500.10582-1000000@madmax.botkin.org>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Mon, 26 May 2003, Marten T Beels wrote:

> 1) If you could only have one band for QRP, what would it be?

Whatever's open at the moment. 8-)

> 2) If you could only have one band for QRP for the next five years, what would
> it be?

Probably 40 meters, but that's because I operate mostly after dark. For
daytime and early evening operation, 20 would be better.

> 3) How about which two bands?

I used to think 40 and 30, but now I wonder if 20 and 30 would be better.

I never seem to have much luck on 15, but ask me again after I do some antenna work this Summer.

> I'm thinking about going with 40 and 15, or 80 and 30 meters because it is my
> understanding that the higher bands 15 and 30 could be operated on their third
> harmonic on antennas for 40 and 80 respectively. Also, 40 and 80 should be
> good bands for the next five years and each as a novice portion where I could
> work on my CW skills. However, an antenna for 80 meters would be rather
> difficult to put up, given that I'll be living in an apartment for the next
> couple of years.

Yup... also check out used rigs, including non-QRP used rigs. You can crank down most QRO rigs to QRP levels; I am currently running a TS-930SAT at 5W or less. The receiver is an order of magnitude better than most QRP rigs. I know you can pick up used FT-757GX, TS-430/440, TS-930 and many other fine solid state radios with general coverage for not much more (and maybe even less) than you'd spend on a new multiband QRP kit.

72,

Dale - N0XAS

--

It's a thankless job, but I've got a lot of Karma to burn off.

Get a PicoKeyer: <http://www.hamgadgets.com>

Date: Mon, 26 May 2003 21:42:52 -0600

From: "DICK SCHNEIDER" <SCHNEIDERDICK@QWEST.NET>

To: "Qrp-L" <qrp-l@Lehigh.EDU>

Subject: [151385] CQC Members: Help required at the Hamcon Convention

Message-ID: <NHBBLPCAMLAMEPPNLABGIELHCJAA.SCHNEIDERDICK@QWEST.NET>

MIME-Version: 1.0

Content-Type: text/plain;

charset="iso-8859-1"

Content-Transfer-Encoding: 7bit

CQC Members:

The club can use your assistance manning the CQC table at the Hamcon ARRL convention next weekend in Estes Park. The exhibitor schedule is as follows: FRI May 30, 1p - 6p; SAT May 31, 9a - 6p; SUN Jun 01, 9a - 11:45a. Saturday is the primary day. We might just set up an unmanned booth Friday and Sunday. If you plan to attend the convention (it's going to be very interesting) and can spare an hour or two at the CQC table, any help will be appreciated. Call me at 720-435-3147.

Thanks

Dick Schneider AB0CD..

Date: Mon, 26 May 2003 22:16:44 -0600
From: "James R. Duffey" <JamesDuffey@comcast.net>
To: martentb@goshen.edu
Cc: QRP-L <qrp-l@lehigh.edu>
Subject: [151386] Re: survey
Message-ID: <BAF842CC.7680%JamesDuffey@comcast.net>
MIME-version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT

Marten - Good survey.

"1) If you could only have one band for QRP, what would it be?"

30 meters. Day and night, summer and winter, solar max and solar minimum, 30 meters is consistent. You can make local contacts and DX. There is a lot of CW QRP activity. There isn't much QRM and you can always find a contact. Rigs are easy to build and good antennas are easy to erect.

"2) If you could only have one band for QRP for the next five years, what would it be?"

30 meters.

"3) How about which two bands"

Well 20 M is a good addition to 30 M. It offers good DX prospects. 40 M is not a bad alternative to 30 M, though, and it will be open later in the winter evenings during the solar minimum.

A lot of this is personal preference, and a lot depends on your operating habits. If you only operate in the late evening, you will not find 20 M much use in a solar minimum. If you only operate in the afternoons, you will find 20 M a good band that is open most of the time, and offers a larger choice of contacts than 40 M in the afternoon. Also 15 M is a good band, often open for DX even during the solar minimum, but you will be much more happy with it if you can operate in the day.

A 10 M rig will give you a lot of fun at the sunspot maximum, and also during the sporadic E season.

QRP rigs are not expensive, and you can certainly save up enough over a year to buy a new one. Just put a dollar, \$0.50 or \$0.25 in a cup every time you operate and when you have saved up enough buy a new rig for a new band.

I hope that his helps. - Dr. Megacycle KK6MC/5

James R. Duffey KK6MC/5
Cedar Crest NM 87009 DM65

Date: Tue, 27 May 2003 00:29:14 -0400
From: Pete Burbank <plburbank@earthlink.net>
To: qrp-l@lehigh.edu
Subject: [151387] Lighter polarity
Message-ID: <5.2.0.9.0.20030527001613.00a38ec0@Earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Does anyone know of any autos these days that are positive ground? I know that in the distant past there were a few and some mobile radios allowed switching from + to minus. Of course that leads to some messy ground plane/shielding problems. Is there a SAE standard?
73
Pete NV4V

Date: Tue, 27 May 2003 03:39:25 -0400
From: Brian Short <bshort4@cox.net>
To: Low Discussion <qrp-l@Lehigh.EDU>
Subject: [151388] Surplus Solar Panels
Message-ID: <572133BC-9016-11D7-A310-00306543B616@cox.net>
Mime-Version: 1.0 (Apple Message framework v552)
Content-Type: text/plain; charset=US-ASCII; format=flowed
Content-Transfer-Encoding: 7bit

If anyone hasn't yet seen the surplus solar panels available from automobile transportation charging systems:

<http://www.k7on.com/equipment/qrp/index.htm>

I am pleased with the panel, but it is NOT an outdoor panel
(at least not permanently outdoor). See page above.

Brian

--

See my web page: <http://www.k7on.com>

Date: Tue, 27 May 2003 07:57:46 -0400
From: Bill Coleman <aa4lr@arrl.net>
To: "John J. McDonough" <wb8rcr@arrl.net>,
 "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [151389] Re: Dayton Icom Announcement
Message-ID: <20030527115946.VTGF12368.imf35bis.bellsouth.net@[192.168.0.20]>
Mime-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"

On 5/22/03 10:34 PM, John J. McDonough at wb8rcr@arrl.net wrote:

>----- Original Message -----

>From: "Bill Coleman" <aa4lr@arrl.net>

>Subject: Re: Dayton Icom Announcement

>

>

>> What does 40 dB TOI mean?

>

>40 dB Third Order Intercept. TOI is a measure of the receiver's ability to
>tolerate strong signals other than the one you are trying to hear. This is
>many orders of magnitude better than the best amateur receivers out there.

I had never seen the term TOI. Instead, I've seen the term Ip3. The Icom
756 Pro II has a value of +20.2 dB, the K2 +21.6. A value of +40 dB would
be quite impressive.

>> How does it compare with the Ten-Tec Orion? The Orion may knock the K2
>> off the top of the receiver hilltop, if the dynamic range bears up in
>> ARRL testing. (Ten-Tec claims about a 20 dB edge over the K2) That's for
>> receiver A. Receiver B is a more conventional general coverage design
>> with a 15 kHz roofing filter.

>

>This isn't a "may knock", this is an entirely different league. The dynamic
>range was way better than anything else, too, but TOI is a much harder
>number to get right.

I believe the two are related. In any case, I'll believe more when the

ARRL performs their testing.

>Unless a receiver is clearly marginal, dynamic range almost never enters the picture anymore.

Uh, I totally disagree. Dynamic range, both for intermodulation (IMDDR3) and blocking (BDR), is a key limitation of modern receivers.

When contesting, it is quite easy to get into a situation where extremely strong signals are adjacent to weaker, desired signals. High dynamic range may make the difference between making a QSO and not being able to hear anything.

>Yes. They bragged on about that at the announcement.

If you can listen on the second receiver while transmitting, they'll sell a ton of them. Even at an inflated price.

Bill Coleman, AA4LR, PP-ASEL Mail: aa4lr@arrl.net
Quote: "Not within a thousand years will man ever fly!"
 -- Wilbur Wright, 1901

Date: Tue, 27 May 2003 08:01:40 -0400
From: Bill Coleman <aa4lr@arrl.net>
To: "John J. McDonough" <wb8rcr@arrl.net>,
 "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [151390] Re: Dayton Icom Announcement
Message-ID: <20030527120341.WGWJ4433.imf46bis.bellsouth.net@[192.168.0.20]>
Mime-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"

On 5/23/03 8:21 AM, John J. McDonough at wb8rcr@arrl.net wrote:

>http://www.natworld.com/ars/pages/back_issues/2001_text/0301_text/817_3ip.htm
>m1

Interesting that the numbers there, don't match the numbers here:

<http://www.elecrafter.com/K2_perf.htm#Main%20RX%20Table>

These are the published ARRL testing results, which I would think are fair and impartial. Your chart doesn't even list a source of the figures.

Bill Coleman, AA4LR, PP-ASEL Mail: aa4lr@arrl.net
Quote: "Not within a thousand years will man ever fly!"
 -- Wilbur Wright, 1901

Date: Tue, 27 May 2003 08:23:10 -0400
From: Alex <kr1st@amsat.org>
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [151391] A buying experience at Quality Technical Books
Message-ID: <3ED358AE.2BEF2A6D@amsat.org>
MIME-version: 1.0
Content-type: text/plain; charset=us-ascii
Content-transfer-encoding: 7bit

Hi folks,

Since I posted a link here to Quality Technical Books not too long ago,
I though I'd share my actual buying experience there.

I ordered 3 books online. When it came to paying, I got a server error
when I submitted my credit card information. I did receive an automated
confirmation email stating that my order was forwarded, but my card
wasn't charged for several days. I sent a message to QTB's provider and
to QTB with some questions about the error message I received and I also
asked if my order was actually being processed. Neither one answered.
After a few days went by I called QTB and he said he shipped my order
the day before and that he had contacted his provider who told him that
they had some problems handling the traffic on their servers. He did not
explain why he didn't answer my message.

QTB charges \$5 more than the actual shipping cost, so I guess that's the
handling part. Even though you get a discount, it is negated by the
handling costs.

Please note that I only described my experience with QTB and do not
express whether or not I'd would order again from QTB. If I had a
different experience, I would have posted that, too.

73,
--Alex KR1ST

Date: Tue, 27 May 2003 06:35:15 -0600 (MDT)

From: "Karl F. Larsen" <k5di@zianet.com>
To: Marten T Beels <martentb@goshen.edu>
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [151392] Re: survey
Message-ID: <Pine.LNX.4.44.0305270627040.1555-100000@bucket.dog>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Marten, save your money and buy a good radio. Either a K2 or a Yaesu FT-817 will do you good for the rest of your time. I have the FT-817 and it's a fun little rig and after you master all the menus, you can set it up to do what you want. I have a special Fox Hunt settings.....:-)

I like 40 and 15. It happens 15 is open more than it appears. All DX hunters like 15.

On Mon, 26 May 2003, Marten T Beels wrote:

> Hello, I'm trying to figure out how to spend my hard earned money. I'm
> looking at a one or two band QRP rig and there are a lot of options from Oak
> Hills Research, Wilderness Radio, Elecraft, and Small Wonder Labs. I thought
> it would be interesting to do a sort of survey.

--

- Karl Larsen k5di Las Cruces,NM Az ScQRPions -

Date: Tue, 27 May 2003 08:55:43 -0400
From: steve.lawrence@itwfeg.com
To: jaevans@codenet.net
Cc: qrp-1@Lehigh.EDU
Subject: [151393] Re: AT Sprint" T1 question"
Message-ID: <0F58A3DC36.0A8EEFC0-0N85256D33.00453B30-85256D33.004704C3@itwfeg.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"

John,
I wound mine *just like* the diagram shown on the filter board page,
located just above the center of the sheet....

[First a couple of definitions for this discussion as I don't have the
diagram in front of me: primary = winding with most turns, secondary =
least turns. (If I have it backwards, sorry...)]

Having said that, I wound the 5 turn secondary in the gap between the primary ends. Also, and while I question this, if you look at the diagram it appears the secondary is wound backwards from the primary. I presume this was done more for the convenience of how the leads "present themselves" to the board, rather than a phasing requirement in the transformer itself. The results looks just like Monty's at:

http://www.io.com/~n5fc/at_sprint_band_modules.jpg

where he used a different color wire to make it easier to see. I might add I needed 1 more turn on the primary for the 40M T1 so the band peaked roughly at the middle range of the trimmer cap. (I did this by winding several more turns, firing up the receiver and peaking the trimmer noting it's position, then removing a turn or two to bring the peak midway into the trimmer rotation. Midway appears at about 9 o'clock if you have the cap oriented such that the flat is at the 6 o'clock position.)

Steve
aa8af

"John A. Evans - N0HJ" <jaevans@codenet.net>
Sent by: owner-qrp-l@Lehigh.EDU
05/26/2003 08:35 PM
Please respond to jaevans

To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
cc:
Subject: AT Sprint" T1 question"

Greetings All again,

I have my Q1/Q2 et al dyslexic questions answered but now I have a question about T1 on each band module. Are folks winding the secondary close to the center of the primary windings, or is it OK to wind the 5 turns around the ends of the secondary turns, near where the wires all connect to the module pads??

tnx es 72 - john - n0hj

Date: Tue, 27 May 2003 23:13:45 +1000
From: "aberkuta" <aberkuta@shoal.net.au>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [151394] Sierra IF amp mod ?
Message-ID: <01f301c32452\$0be9dd60\$626edccb@aberkuta>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="Windows-1252"
Content-Transfer-Encoding: 7bit

Hi

I have been playing around with my Noga version of the Norcal Sierra and have struck a problem. Being bored (well it has rained a LOT down here lately) and an abundant supply of 4mhz xtals, I have replaced the IF and other xtals in the Sierra with ones matched to about 3hz to see if this had any effect on the IF bandwidth and see if it would improve performance in the worst of qrn on 80m.

As you are aware, it did. Bandwidth with the ABX varies from about 60hz to 300hz. The effect of greater loss with the narrower bandwidth has made Rx marginal at best. I remember a long ago site that had a mod to the Sierra that changed L11 feeding from the IF xtals to the MC1350 amp to a transformer and balanced feed to the IC. The mod dated back I think from the Norcal rig version? and apparently allowed a couple of db improvement in signal level, and I could do with every bit that I can find.

I have 'Googled' for hours and not been able to revisit the site. Would anyone remember this mod, or have notes? Any information, leads, URL would be very appreciated.

How does the Sierra perform, great as the qrn on tonight's VK cw qrp net did not hinder copy at all compared to what has occurred in the past, almost as good as Zim's DSP unit.

regards

Alex VK2KR

Date: Tue, 27 May 2003 06:16:52 -0600 (MDT)
From: David Ek <ekdave@earthlink.net>
To: qrp-1@lehigh.edu
Subject: [151395] OT: Best Regards from my Car?
Message-ID: <917997.1054041441407.JavaMail.nobody@bert.psp.pas.earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

All,

Couldn't resist sharing this with you. I was driving my car to work this morning and happened to glance at the odometer while stopped at a stop light. It read: "73737.3". An omen?

73 de Dave NK0E

Date: Tue, 27 May 2003 09:23:19 -0400
From: "sslyon" <sslyon@megalink.net>
To: <martentb@goshen.edu>,
"Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>
Subject: [151396] Survey > opinions
Message-ID: <000d01c32453\$23d8c480\$0ac8e742@megalink.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

OPINIONS:

Restricted to ONE BAND: it would definitely be 30m. It can be excellent for DX and local contacts both day and night, with manageable antenna size. Being WARC, it's useable at times when QRO contesters are chewing up the 'regular' bands, and it has no SW Broadcast burden.

Restricted to TWO BANDS: I'd go 30m and 20m, even tho 20m is not usually well populated with QRP. It provides easy access to DX with a large variety of antennas not easily achievable at lower frequencies. (I like playing with wire)

QRO DX folks are quite QRP friendly on both bands when you get away from the QRP watering holes.

20m & 30m will probably provide the most QRP operating opportunities over all

seasons and times of day.

73

aa1my

Seabury & Sharon Lyon
99 Sparrowhawk Mtn Rd
Bethel ME, 04217 U.S.A.
207-836-2576

Date: Tue, 27 May 2003 09:28:04 -0400
From: "w8diz" <w8diz@fpqrp.com>
To: <multipigplus@yahoogroups.com>
Cc: <qrp-1@Lehigh.EDU>
Subject: [151397] HB: MP+ SWR Kit completed.
Message-ID: <00a001c32453\$cdf50be0\$b8cf1d41@cinci.rr.com>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi Gang,

The 7th PCB of the MP+ series kits is now completed.
This is the last of the major kits to build the MP+
transceiver. Shipping starts this week.

<http://partsandkits.com/multipig.asp>

72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
Clermont County - EM79uf - near Cincinnati; 39:13:05N 84:18:18W
RIG:multiPIG+ ANT:470 FT Horiz Loop <http://kitsandparts.com>

Date: Tue, 27 May 2003 09:28:42 -0400
From: Alex <kr1st@amsat.org>
To: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [151398] Re: A buying experience at Quality Technical Books
Message-ID: <3ED3680A.38F9C027@amsat.org>
MIME-version: 1.0
Content-type: text/plain; charset=us-ascii
Content-transfer-encoding: 7bit

I forgot to mention that the books arrived well packaged in a box, and not in a thick envelope, which is definitely a plus. One book was in its original plastic wrap, and one book seemed to be slightly used. I can not positively prove this, but that's the condition it arrived in. (I purchased the books as new.)

Even though you do go to a secure web page to enter your ordering information, the provider does not get an authorization number from their credit card clearing house (which is similar to charging the card, but the actual charge happens later at night in a batch settlement). Your information will somehow be forwarded to QTB who handles the actual transaction. I verified this.

Your email address will be placed on QTB's mailing list in order to send you advertisements. There's no opt-out, opt-in or notification for this on their order form.

73,
--Alex KR1ST

Alex wrote:

>
> Hi folks,
>
> Since I posted a link here to Quality Technical Books not too long ago,
> I though I'd share my actual buying experience there.

Date: Tue, 27 May 2003 06:29:09 -0700
From: "john_k7fd" <john_k7fd@cablespeed.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [151399] Re: Survey > opinions
Message-ID: <001f01c32453\$f494e4f0\$3801a8c0@hamshack>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

What? And miss out on all that contest qrm? :)

73 John K7FD

From: "sslyon" <sslyon@megalink.net>

> OPINIONS:
>
> Restricted to ONE BAND: it would definitely be 30m.

Date: Tue, 27 May 2003 10:53:01 -0400
From: Caitlyn Martin <ku4qd@earthlink.net>
To: martentb@goshen.edu
Cc: qrp-1@lehigh.edu
Subject: [151400] Re: survey
Message-ID: <20030527105301.0ba9ae73.ku4qd@earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

On Mon, 26 May 2003 19:48:58 -0500
Marten T Beels <martentb@goshen.edu> wrote:

> I'm
> looking at a one or two band QRP rig and there are a lot of options
> from Oak Hills Research, Wilderness Radio, Elecraft, and Small Wonder
> Labs. I thought it would be interesting to do a sort of survey.

Hi, Marten,

Interesting survey. It should generate some good responses and discussion.

>
> 1) If you could only have one band for QRP, what would it be?

Tough call. Either 17m or 15m.

>
> 2) If you could only have one band for QRP for the next five years,
> what would it be?

Probably 17 meters. It will be open more than 15 as the cycle declines, and should never be totally dead for long. The HF Pack group centers there. Also, I don't care much for contests, and 17 is blissfully contest free.

>
> 3) How about which two bands?

17 and 40. 40 CW is a mainstay of QRP operation, and with the cycle in decline you need a lower band.

>
> I'm thinking about going with 40 and 15, or 80 and 30 meters because

> it is my understanding that the higher bands 15 and 30 could be
> operated on their third harmonic on antennas for 40 and 80
> respectively. Also, 40 and 80 should be good bands for the next five
> years and each as a novice portion where I could work on my CW skills.
>

I would definitely do 40 and 15. Have a nice antenna tuner (I personally like the Mizuho KX-S9 Sky Coupler or KX-QRP) because the third harmonic of 40 will be *above* the 15 meter band. Also, it is unlikely that your dipole will cover the entire North American 40m band, and I have certainly worked 40m QRP SSB at times. There is almost always CW activity on 40.

Another thought: 17m is very near the fifth harmonic of 80m, as has been discussed here recently. You could do a single dipole for those two bands if your heart is set on 80m. I prefer 17 to 30 because you are more likely to get long skip during the day and because more modes are available to you.

72,
Caity
KU4QD

Date: Tue, 27 May 2003 11:02:40 -0400
From: "sslyon" <sslyon@megalink.net>
To: <martentb@goshen.edu>,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [151401] Re: survey: Re Rigs
Message-ID: <001401c32461\$04fb1fa0\$0ac8e742@megalink.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

More PERSONAL OPINION:

Forgot to mention an important qualifier for my band choices. I like to build stuff and only have an IC 706 IIG for an all-around home station and for emergency use here deep in the Maine woods. I wouldn't buy a commercial (ICOM, SGC...) QRP package, personally, as I'm really fascinated by the constant quest for performance in kit rigs in both the "minimalist" and "unlimited" lines of pursuit. My roster includes a couple of Rock Mites, SOP's, FireBalls, SW & DSW's, KD1JV rigs. I get into contests occasionally not so much for the paper but to give the rigs, antennas, and me, a workout.

My idea of a great reward is to hike out to a "good antenna location", put up a "good antenna" and make a whole bunch of contacts over a large part of the globe

and to say HI to our gang of "usual suspects". I want to do that with gear that doesn't need a mule to carry it. (rig, batteries, ant...) The quest has been wonder-full and gets better all the time.

73

aa1my

Seabury & Sharon Lyon
99 Sparrowhawk Mtn Rd
Bethel ME, 04217 U.S.A.horde.org/imp/

Date: Tue, 27 May 2003 11:04:18 -0400
From: Caitlyn Martin <ku4qd@earthlink.net>
To: dale@botkin.org
Cc: QRP-L@lehigh.edu
Subject: [151402] Re: survey
Message-ID: <20030527110418.4589f0d7.ku4qd@earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

On Mon, 26 May 2003 22:39:09 -0500 (CDT)
Dale Botkin <dale@botkin.org> wrote:

>
> Yup... also check out used rigs, including non-QRP used rigs. You
> can crank down most QRO rigs to QRP levels;

Good point. There are also many used QRP rigs that can be had inexpensively, ranging from the Ten Tec Argonaut 509 to the Index Labs QRP Plus to the Kenwood TS-670. My personal favorite is the Tokyo Hy-Power HT-750: 6, 15, and 40 meters, SSB/CW, in a handheld. It has a surprisingly good receiver, and will hold up well on an outside antenna. You may have to switch in the attenuator to get between the broadcasters on 40m at night for SSB, but other than that it should handle anything at default settings. Output is 3W on HF and 2W on 6 meters.

I should also point out that 6m is a GREAT QRP band. I have many, many countries worked on both SSB and CW. Propagation modes like Es, aurora, and meteor scatter do not depend on the sunspot cycle. While I would not recommend 6m as an only band since propagation is not at all consistent, it is a great add on to any QRPers shack.

Also, if you aren't determined to build it yourself you may want to also consider used monoband QRP rigs. Nobody is going to get my Mizuho P-7DX and P-21DX QRPp CW portables away from me. Mine are the factory built

models, but if I ever found an unbuilt kit and someone to translate the manual for me I would definitely tackle building one.

72,
Caity
KU4QD

Date: Tue, 27 May 2003 09:13:55 -0600 (MDT)
From: "Karl F. Larsen" <k5di@zianet.com>
To: qrp-l@lehigh.edu
Subject: [151403] K2 TOI numbers
Message-ID: <Pine.LNX.4.44.0305270902170.2003-100000@bucket.dog>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Since I have k2.pdf from the ARRL Web page I displayed it and calculated the Third Order Intercept (TOI) for this radio. The equation I used is $1.5(A - B) + B$ or $1.5(\text{IMD-DR}) + \text{MDS}$ which are identical and give identical results. The frequency is 14.02 MHz.

The MDS (minimum detectable signal) = -117dbm
The IMD-DR = 96 DB (from the swept 2 tone chart)

The IP3 or TOI = +27 DB

This TOI is about the best I have seen so far. And it's from ARRL data so I have reason to believe it's accurate.

--

- Karl Larsen k5di Las Cruces, NM Az ScQRPions -

Date: Tue, 27 May 2003 09:17:31 -0600 (MDT)
From: "Karl F. Larsen" <k5di@zianet.com>
To: David Ek <ekdave@earthlink.net>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [151404] Re: OT: Best Regards from my Car?
Message-ID: <Pine.LNX.4.44.0305270916250.2003-100000@bucket.dog>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi David you should at least change your water hoses and spark plugs and wires....:-)

On Tue, 27 May 2003, David Ek wrote:

> All,
>
> Couldn't resist sharing this with you. I was driving my car to work this morning
and happened to glance at the odometer while stopped at a stop light. It read:
"73737.3". An omen?
>
> 73 de Dave NK0E
>
>

--

- Karl Larsen k5di Las Cruces,NM Az ScQRPions -

Date: Tue, 27 May 2003 11:22:50 -0400
From: Caitlyn Martin <ku4qd@earthlink.net>
To: qrp-l@lehigh.edu
Subject: [151405] Receiver performance (was: Dayton Icom Announcement)
Message-ID: <20030527112250.58ca4d70.ku4qd@earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

On Tue, 27 May 2003 07:57:46 -0400
Bill Coleman <aa4lr@arrl.net> wrote:

>
> Uh, I totally disagree. Dynamic range, both for intermodulation
> (IMDDR3) and blocking (BDR), is a key limitation of modern receivers.
>
> When contesting, it is quite easy to get into a situation where
> extremely strong signals are adjacent to weaker, desired signals. High
> dynamic range may make the difference between making a QSO and not
> being able to hear anything.

Yep. This is my main complain with the FT-817 when compared to other QRP rigs I have. When I sold my FT-817 it was because of financial difficulties. I have had many opportunities to replace it, but I haven't. Enough said.

72,
Caity
KU4QD

Date: Tue, 27 May 2003 09:16:16 -0700
From: "Bill Jones" <kd7s@psnw.com>
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [151406] Descriptions and Photos of rigs
Message-ID: <000d01c3246b\$4e9516c0\$1b42f842@RadioRoom>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Friends,

I just ran across an interesting web site that gives specifications and often a photograph of many pieces of ham gear, new and old. If you're not sure what that National NC-98 receiver on ebay should look like, this site will show you:

<http://www.rigpix.com/index.shtml>

=====
Bill Jones KD7S <><
<http://www.psnw.com/~kd7s>
Sanger, California
=====

Date: Tue, 27 May 2003 09:55:13 -0700
From: Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>
To: "'qrp-1@Lehigh.EDU'" <qrp-1@Lehigh.EDU>
Subject: [151407] More Third Order Intercept Technical Stuff
Message-ID: <7FD24C15A06DD511BF9E00D0B73E995206FBFFB1@az33exm05.corp.mot.com>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"

Speaking of specmanship, I do not really think it is fair to publish a spec using a pair of 20 KHz spaced strong signals with the receiver tuned an additional 20 KHz away from that. This kind of spacing (or 50 KHz or 100 KHz spacing as some manufactures use) hide the real performance of the receiver under real life conditions. In contest or pileup conditions, we usually do not have the luxury of

keeping big signals 20 KHz away.

I really like the swept frequency IP3 dynamic range charts that the ARRL lab has done. One of the things these charts clearly show is that the IP3 spur rejection performance of the receiver degrades significantly as the test signal pair moves closer and closer in. While testing with 20 or 50 KHz spaced signals show the performance of the first receiver stage or two, going right down to one or two KHz shows a better indication of how the receiver as an overall system is performing.

Some folks think that simply having a narrow crystal filter guards them against junk 1-2 KHz away. This appears not to be the case. When I was testing my DC receivers, I was very surprised to find that my test receiver had roughly 18 db better IP3 spur rejection in the close in area (3 KHz and less) than other really good receivers. This surprised me because these receivers had the benefit of sharp crystal filters early in the receiver lineup, and the roll off of these crystal filters were much better than the simple R/C roll off in the front end of my test receiver.

I have an untested theory that the close in IP3 performance of these really good superhet receivers is being compromised by wimpy modern crystals used in the crystal filters. When I look at the power rating of the readily available crystals from places such as Digikey or Mouser, I see that they tend to fall in the 0.05 to 0.1 mW (50 to 100 uW) range. Don't even think about building a high performance crystal filter using cylinder type crystals, as their power rating can be as small as 1 uW! As a general rule of thumb, IP3 distortions tend to occur when a device is run about 23 db lower than their rating. This rule would imply that typical 50 -100 uW HC-49 crystals would start causing IP3 distortions when pushed to levels corresponding to only 3.5 to 7 uW (0.0035 - 0.007 mW). Remember, it takes only a tiny, tiny amount of distortion in the receiver front end to produce a receiver spur 130 to 140 db down that can be heard in our very sensitive receivers!

One of the things that I have noticed in the design of superhet receivers, is a post first mixer IF amplifier that runs with lots of current. This is done so that the IF amp can withstand all the high level signals spread across the entire band before things get narrowed down by the crystal filter.

As I mentioned above, it is likely that the relatively poor close in IP3 spur performance of really good superhet receivers is due to the crystal filters they use. These crystals start to distort as strong signals start approaching the filter pass band and thus begin to excite the crystals. The use of a high current drain IF preamp probably worsens this situation. Having a tighter crystal filter will not stop these crystals from distorting and creating IP3 spurs at the edge of the filter.

On the other hand, the Rs and Cs in my test DC receivers are not at all stressed by signals of a volt or two. Using the 23 db rule, which might not really apply to Rs and Cs, would limit a 50v detection capacitor to RF voltages of 3.5v or

less.

On possible solution to close in IP3 performance of superhet receivers may be simply to use physically larger crystals. The old FT243 type crystals in an IF filter might may for really good close in superhet receiver performance. Another thought is that all crystals in a given crystal filter might not need to be physically large. It might be good enough that the first crystal or two in the filter be physically larger since they are the ones that will be the first line of defense against large out of pass band signals.

- Dan, N7VE

Date: Tue, 27 May 2003 10:05:56 -0700
From: David Simmons <dsimmons@macromedia.com>
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [151408] Help ID (and revive) an OHR rig
Message-ID:
<A501E8FB4F4D5A4786855C01686A827A0F6A1471@ex-600town-02.macromedia.com>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"

My quest to revive a hamfest purchase continues, but I'm still stuck identifying this radio.

Please take a look at <http://www.zievid.com/OHR/OHRRig.htm> and let me know if you have any info about the rig.

I'm looking for a schematic, alignment instructions or manual.

Many thanks,

- Dave

Date: Tue, 27 May 2003 10:55:29 -0700
From: Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>
To: "'k5di@zianet.com'" <k5di@zianet.com>
Cc: "'qrp-l@Lehigh.EDU'" <qrp-l@Lehigh.EDU>
Subject: [151409] Re: K2 TOI numbers
Message-ID: <7FD24C15A06DD511BF9E00D0B73E995206FBFFB3@az33exm05.corp.mot.com>
MIME-Version: 1.0
Content-Type: text/plain;

charset="iso-8859-1"

Karl:

You might want to recheck at your numbers again for the sensitivity of the K2. Using the 500 Hz cw filter, I would expect a receiver sensitivity number more in the -133 to -138 dbm range. -117 dbm on 20m is practically deaf, at least for cw bandwidth. The sensitivity will impact the final IP3 figure.

One of the things your alternative equation, $1.5(IP3DR) + MDS$, points out is that it is easier to get a high IP3 rating using a deaf receiver than a sensitive one. Since MDS is a negative number (such as -135 dbm), a sensitive receiver (such as -140 dbm) starts out further in the hole than a deaf one (such as -117 dbm).

What we ideally want is high sensitivity and good high level signal performance at the same time. A deaf receiver with +40 db IP3 is not the same as a sensitive receiver with the +40 db IP3 rating. A sensitive receiver has to have a larger IP3 dynamic range to get to +40 dbm than a deaf receiver, making the sensitive receiver.

In the classic approach, receivers make this choice "either/or" by turning off the RF preamp to get better IP3 performance, or turning the pre-amp on to get better sensitivity.

Your equation also shows that by simply applying the RF attenuation button (i.e., making the receiver more deaf), the IP3 of the receiver can be increased db for db by the amount of RF attenuation applied. On 40m, where your +5 db IP3 receiver has an extra 20 db of excessive sensitivity due to band noise (receiver MDS -136, band noise at -116 dbm), a 20 db receiver attenuator can be used to bring it up to +25 dbm IP3 for no real penalty.

- Dan, N7VE

Date: Tue, 27 May 2003 14:13:31 -0400
From: "Hare,Ed, W1RFI" <w1rfi@arrl.org>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [151410] RE: Third Order Intercept
Message-ID: <721D3436A7C2B344A301FD4A413C71A9016F301C@kosh.arrlhq.org>
content-class: urn:content-classes:message
MIME-Version: 1.0
Content-Type: text/plain;
charset="Windows-1252"
Content-Transfer-Encoding: quoted-printable

ARRL makes its measurements well above the noise floor. Typically, test = tones that give a receiver output of S5 are used. This puts the test =

tones well above S9, but not so high as to be ridiculous.

73,=20

Ed Hare, W1RFI

ARRL Lab

225 Main St

Newington, CT 06111

Tel: 860-594-0318

Internet: w1rfi@arrl.org

Web: <http://www.arrl.org/tis>

> -----Original Message-----

> From: Glen Leinweber [mailto:leinwebe@mcmail.cis.mcmaster.ca]

> Sent: Monday, May 26, 2003 7:05 PM

> To: Low Power Amateur Radio Discussion

> Subject: Re: Third Order Intercept

>=20

>=20

> Seems to me there's a slight procedural difference between ARRL
> IP3 measurements, and that of another guru, namely Ulrich Rohde.

>=20

> The standard IP3 test compares two signal levels - the signal level
> of one of two tones coming into the receiver front end, and the
> signal level of one of the IP3 "birdies". The ratio of these=20
> two levels
> is used to find the intercept.

> But nowhere does it say how strong these two levels should be.
> Everyone agrees that measurements should be done in the region
> where IP3 birdies increase at a rate 3X that of input signals. This
> still leaves quite a range over which measurements can be made...

>=20

> ARRL tests with signal levels as small as possible...the input level
> is set so that the IP3 birdie is just equal to the noise level of the
> receiver.

> Rohde says this is prone to a bit of error - that measuring noise
> levels is a bit less precise than measuring signal levels accompanied
> by very little noise.

> So he likes to measure the birdie amplitude at a higher level.
> He runs the risk of signal levels above the "3X rule". But I'm sure
> he's careful to check for that.

>

> Am wondering if the ARRL method might give a bit different result
> than Rohde's method? If the noise floor is raised by reciprocal
> mixing (caused by phase noise of the receiver's local oscillator),
> then what's the noise floor? "MDS" (minimum discernable signal)
> is used as the noise floor in ARRL calculations, and is based on
> the noise floor with just a 50 ohm resistor connected to the input.

> Does ARRL discriminate between noise floor with no signals
> present, and the noise floor with two strong IP3 test signals present?
>=20
> Nick has mentioned the consideration for choosing the frequency
> spacing between the two test tones - often 20 KHz.
> Should be small enough so both tones get into the front-end mixer
> without either getting attenuated by RF filters. Yet far enough apart
> that the I.F. filter can reject both tones entirely, and pass the
> birdie.
> So it becomes a test of front-end signal-handling ability, not a
> test of I.F. selectivity.
> =20
>=20
>=20

Date: Tue, 27 May 2003 14:29:33 -0400 (EDT)
From: <n2go@arrl.net>
To: <qrp-1@Lehigh.EDU>
Subject: [151411] Teflon wire shipped overseas \$20 US
Message-ID: <Pine.LNX.4.33.0305271420180.24606-100000@valhalla.v>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

If anyone from Europe or Japan would like some of the teflon wire that I had listed it is available for shipment to Europe and Japan via Global Priority mail.

The wire is 22 AWG teflon insulated, silver plated, stranded.
5 -fifty foot rolls (total of 250') shipped to Europe or Japan for \$20 US
Shipping is included in this price !!!

I am able to shoehorn the five rolls of wire into a Global priority mail envelope.
Now you guys can take advantage of the surging Euro /devalued dollar.

Payment via paypal is ok. Email to confirm availability.

73,

Jim n2go

Date: Tue, 27 May 2003 12:19:09 -0700

From: "bob baxter" <rbaxter@cybertrails.com>
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [151412] Re: Lighter polarity
Message-ID: <023701c32484\$f1e1dca0\$56542aa2@bobbaxte>
MIME-Version: 1.0
Content-Type: text/plain;
charset="Windows-1252"
Content-Transfer-Encoding: 7bit

> Does anyone know of any autos these days that are positive ground?

The manual for my 1955 Austin Healy A100 stated: "You will notice that the positive lug of the accumulator is earthed." The accumulator was found beneath the left side of the bonnet between the facia panel and the gudgeon pins. (or was it in the boot?)

Bob Baxter AA7EQ
Bisbee, Az.

Date: Tue, 27 May 2003 14:04:27 -0600 (MDT)
From: "Karl F. Larsen" <k5di@zianet.com>
To: Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>
Cc: "'qrp-1@Lehigh.EDU'" <qrp-1@Lehigh.EDU>
Subject: [151413] Re: K2 TOI numbers
Message-ID: <Pine.LNX.4.44.0305271333210.2240-100000@bucket.dog>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Yes I goofed Dan. I used the sensitivity at 14.7 MHz, the band edge. Looking at the ARRL paper again I find the sensitivity at 14.02 MHz is -131.0 or -137.6 with the preamp turned on. As you have said so properly, the equation used to calculate $IP3=TOI$ by you and the ARRL is subject to the "selected" sensitivity.

On 40 meter Fox Hunts I have the pre-amp off, a 10 DB attenuator in use and the RF Gain turned down so the ambient noise level is a quiet rushing noise. As you point out, Under this condition the FT-817 which has a $TOI=+5$ DB with preamp off will be +15 DB with the attenuator in place and with 10 BD of RF Gain decrease it's a $TOI=+25$ DB!

Now to prove your equation is equal to the ARRL equation. In

your equation $1.5(A - B) + B$ the B is the MDS. In this case $MDS = -137.6$ we find out. Now $A = (MDS + IMD-DR)$ and your equation becomes:

$$1.5((MDS + IMD-DR) - MDS) + MDS$$

and deleting the 2 MDS in the first term gives:

$$1.5(IMD-DR) + MDS \quad \text{the ARRL equation.}$$

The "correct" TOI for the K2 using MDS with the preamp on of -137.6 dbm gives a TOI = $+6.4$ DB. With the preamp off it becomes TOI = $+13$ DB.

So we learn that the TOI is very sensitive to receiver MDS and observe that on 40 meters the TOI will go way up if we use the noise floor of the band. I wonder if that really happens?

On Tue, 27 May 2003, Tayloe Dan-P26412 wrote:

> Karl:

>

> You might want to recheck at your numbers again for the sensitivity of the K2. Using the 500 Hz cw filter, I would expect a receiver sensitivity number more in the -133 to -138 dbm range. -117 dbm on 20m is practically deaf, at least for cw bandwidth. The sensitivity will impact the final IP3 figure.

>

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>

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>

> In the classic approach, receivers make this choice "either/or" by turning off the RF preamp to get better IP3 performance, or turning the pre-amp on to get better sensitivity.

>

> Your equation also shows that by simply applying the RF attenuation button (i.e., making the receiver more deaf), the IP3 of the receiver can be increased db for db by the amount of RF attenuation applied. On 40m, where your $+5$ db IP3 receiver has an extra 20 db of excessive sensitivity due to band noise (receiver

MDS -136, band noise at -116 dbm), a 20 db receiver attenuator can be used to bring it up to +25 dbm IP3 for no real penalty.

>

> - Dan, N7VE

>

--

- Karl Larsen k5di Las Cruces, NM Az ScQRPions -

Date: Tue, 27 May 2003 14:37:50 -0600 (MDT)

From: "Karl F. Larsen" <k5di@zianet.com>

To: Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>

Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>

Subject: [151414] Re: More Third Order Intercept Technical Stuff

Message-ID: <Pine.LNX.4.44.0305271426390.2240-100000@bucket.dog>

MIME-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Dan, I think the ARRL explains the use of 20 KHz spacing quite clearly. It's a standard and you know where you will find the third harmonic exactly. The measurement requires this information. Now ARRL does experiment with larger spacing and shows that IMD-DR does not change much as you go further out.

ARRL does plot two tones in the receiver passband and clearly shows the mixer products of those 2 tones popping up in the passband. I have not seen a radio that does well. But a direct conversion receiver might do better in this test than the usual good receivers like the K2.

On Tue, 27 May 2003, Tayloe Dan-P26412 wrote:

> Speaking of specmanship, I do not really think it is fair to publish a spec using a pair of 20 KHz spaced strong signals with the receiver tuned an additional 20 KHz away from that. This kind of spacing (or 50 KHz or 100 KHz spacing as some manufactures use) hide the real performance of the receiver under real life conditions. In contest or pileup conditions, we usually do not have the luxury of keeping big signals 20 KHz away.

>

> I really like the swept frequency IP3 dynamic range charts that the ARRL lab has done. One of the things these charts clearly show is that the IP3 spur rejection performance of the receiver degrades significantly as the test signal pair moves closer and closer in. While testing with 20 or 50 KHz spaced signals show the performance of the first receiver stage or two, going right down to one or two KHz shows a better indication of how the receiver as an overall system is performing.
>
--

- Karl Larsen k5di Las Cruces, NM Az ScQRPions -

Date: Tue, 27 May 2003 14:02:26 -0700
From: Tayloe Dan-P26412 <Dan.Tayloe@motorola.com>
To: "'Karl F. Larsen'" <k5di@zianet.com>
Cc: "'qrp-l@Lehigh.EDU'" <qrp-l@Lehigh.EDU>
Subject: [151415] RE: More Third Order Intercept Technical Stuff
Message-ID: <7FD24C15A06DD511BF9E00D0B73E995206FBFFB7@az33exm05.corp.mot.com>
MIME-Version: 1.0
Content-Type: text/plain

I think you are missing the difference between the two IP3 tests. One is checking for junk appearing in the receiver passband due to strong signals outside the receiver passband, and the other is looking for audio purity for signals that are actually inside the receiver passband and which really belong there.

The IMDDR looks at the response of the receiver to signals outside the desired receiver passband. The IMDDR swept tests show receivers start to do a progressively poorer job of keeping out spurious junk as strong signals get close in. These are the signals we don't want to hear and that we don't want to produce spurious junk that appears within our receiver passband.

The second test are two different signals that really, truly belong within the receiver passband, signals we are actually supposed to be hearing. There is a lot more gain behind the receiver main filtering than there is in front of it, so the distortion is usually a lot worse inside the receive passband than out side of it.

However, if the distortion products caused by real signals located inside the receiver passband, are more than 30 db down, you will not be able to hear these distortion products because they are so small compared to the "parent" signals that produce them. From this point of view, there is little to be gained from an excessively clean audio path, from a distortion point of view.

On the other hand, if you use something like a DSP audio filter on the audio output of your rig to eliminate undesired large signals in the receiver passband in order to better hear a very weak signal, then a low distortion audio path will be more important to you, as you fighting against in band distortion spurs caused by these strong audio signals that are in the passband of the receiver.

In the Norcal 30 presentation on the Red Hot Radio web page, (www.redhotradio.com) I think I show the published distortion results of a good rig, and the poor results of what is supposed to be a good rig. I think it also has an example of some swept IP3 comparisons.

I really wish the ARRL would blow up the close in IP3 results. The far out results are kind of boring as you pointed out.

- Dan, N7VE

> -----Original Message-----

> From: Karl F. Larsen [mailto:k5di@zianet.com]

> Sent: Tuesday, May 27, 2003 1:38 PM

> To: Tayloe Dan-P26412

> Cc: Low Power Amateur Radio Discussion

> Subject: Re: More Third Order Intercept Technical Stuff

>

>

>

> Hi Dan, I think the ARRL explains the use of 20 KHz spacing quite
> clearly. It's a standard and you know where you will find the third
> harmonic exactly. The measurement requires this information. Now ARRL
> does experiment with larger spacing and shows that IMD-DR does not
> change much as you go further out.

>

> ARRL does plot two tones in the receiver passband and clearly
> shows the mixer products of those 2 tones popping up in the
> passband. I
> have not seen a radio that does well. But a direct conversion
> receiver
> might do better in this test than the usual good receivers
> like the K2.

>>

Date: Tue, 27 May 2003 17:04:04 -0400

From: "cal.jsi" <cal.jsi@verizon.net>

To: "QRP-L" <qrp-l@Lehigh.edu>

Subject: [151416] Re: K2 TOI numbers (longish)

Message-ID: <000301c32493\$82221510\$fc53fea9@Sharon>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

All,

I'm surprised that people are describing the third order intercept point of amplifier chains, be they receivers or whatever, simply in decibels. For this figure to have any meaning whatsoever it must be related to a power, e.g., one milliwatt, or 0 dBm, at a specific point in the chain, e.g. at the input to the receiver!

Furthermore, in a 500 Hertz bandwidth, the equivalent noise power referred to the input for a receiver (first RF amplifier and contributing follow-on stages) with a 10 dB noise figure, which should be quite straightforward to achieve in HF receivers, is, I believe, about -136 to -137 dBm (arrived at on the back of an envelope). One might then assume that the minimum detectable signal is a power at the antenna terminal of the radio equal to that amount. A receiver with a minimum detectable signal of -117 dBm, is deaf indeed! However, it's perfectly legitimate to use an attenuator in front of a receiver to trade off sensitivity in favor of strong signal handling capabilities.

Otherwise, receiver designers should be paying attention to the gain distribution and power output capability, or linearity, of the stages throughout the receiver. One may indeed want an RF amplifier, mixer and first IF amplifier, prior to the establishment of the bandwidth of the receiver, to have high power output capability and thus linearity. You do not want the intermodulation distortion products of whatever signals are presented to the receiver to show up in the passband. FWIW, I personally feel that the two tone tests that quantify the third order intermodulation distortion products would be most meaningful if both tones and the products were within the receiver's passband as established by IF filters. But it's still necessary to consider each stage through the receiving chain.

And please don't pump 10 Watts (+40 dBm) into the input of your rigs; you'll not like the resulting repair bill!

72/73

Cal K4JSI

Date: Tue, 27 May 2003 16:08:35 -0500
From: Michael Goins <mgoins@usa.net>
To: <qrp-l@lehigh.edu>
Subject: [151417] FOR SALE update
Message-ID: <131HeAVij2080S07.1054069715@uwdvg007.cms.usa.net>
Mime-Version: 1.0

Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: quoted-printable

Had a buyer back out, so still have the Kenwood phones and the Mirage
wattmeter. =

Kenwood HS-5 headphones, new, no box. Includes spare cups (also new). \$50=

Mirage Wattmeter, 200/200/20 meter. Very good condition and works pretty =
well
qrp for those who need both a qrp and qro meter. \$100

Please reply off list, and will consider qrp related trades. Thanks for t=
he
space.

72,
mike
wb5yjx
100% Solar station: SW20+, SW30+, RM-40
Mobile: FT-817 @ 1 watt, CW and SSB
QRP-ARCI 3922 (former managing editor, QRP Quarterly), =

SOC 54, Flying Pig 447, QRP-L 2130, Adventure Radio 810,
Alaska QRP 514, QCWA 30857

Date: Tue, 27 May 2003 16:09:25 -0500
From: mark.milburn@juno.com
To: qrp-l@lehigh.edu
Subject: [151418] Iowa QRP Club CW Net
Message-ID: <20030527.160952.-264473.0.MARK.MILBURN@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

The net will be conducted on or around 7.112 at 8 PM Iowa time (CDT) on
Wednesday night. I'll be calling "CQ IQN", and when you hear QNI?....you
jump in with your call or any noise you want to make and I'll get back to
you. Hopefully the QRN will cut us some slack...rain predicted, but
should be out of the area by net time. Hope you can make it.

72 Mark KQOI
Des Moines, Iowa

Date: Tue, 27 May 2003 17:48:13 -0400
From: Ed Tanton <n4xy@earthlink.net>
To: qrp-L Reflector <qrp-l@lehigh.edu>,
noga reflector <nogaqrp@mailman.qth.net>
Subject: [151419] GDO
Message-ID: <5.2.0.9.2.20030527174131.02e76158@pop.earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

There is one of the BETTER Millens FS at the e-place: a 90652. This is the AC-powered, Industrial version similar to the 90651, but with indiv. calibrated coils as well as the extra 4 LF coils. These 4 coils are frequently sold, by themselves, for > \$50. The seller has a \$50 minimum starting bid, but it will go for more than that. # is 3026821558. This 'package' is not at all common.

73 Ed Tanton N4XY <n4xy@earthlink.net>

Ed Tanton N4XY
189 Pioneer Trail
Marietta, GA 30068-3466

website: <http://www.n4xy.com>

All emails <IN> & <OUT> checked by
Norton AntiVirus with AutoProtect

LM: ARRL QCWA AMSAT & INDEXA;
SEDXC NCDXA GACW QRP-ARCI
OK-QRP QRP-L #758 K2 (FT) #00057

"He that gives up a little liberty to gain
temporary security will lose both and
deserve neither".
--Benjamin Franklin

"Suppose you were an idiot ...
and suppose you were a member of
Congress... but I repeat myself."
--Mark Twain

Date: Tue, 27 May 2003 17:37:13 -0400
From: Rick McKee <kc8aon@juno.com>
To: qrp-l@Lehigh.EDU
Subject: [151420] Re: Lighter polarity
Message-ID: <20030527.175101.9126.0.kc8aon@juno.com>

I have been a mechanic for 27 years, and every car I have ever seen has been center positive and shield is ground except for some 50's classics like the 56 T bird, but then it was a 6 volt system !

72/73 de: Rick McKee, KC8AON <> Willow Wood, Ohio <> Grid: EM88rl
SW 40+, HW-8, Yaesu FT-7, Homebrew 6V6 tube TX & Hallicrafters SW500 RX
QRP-L #2112, FPqrp #33, AR QRP #269
QRP'ers DEPEND ON SKILL - NOT RAW POWER !

The best thing to hit the internet in years - Juno SpeedBand!
Surf the web up to FIVE TIMES FASTER!
Only \$14.95/ month - visit www.juno.com to sign up today!

End of QRP-L Digest 2933

